

# SUHAS VENKATA KARAMALAPUTTI

📞 7337640385 📧 Email 💬 LinkedIn 🐾 Github 🌐 Portfolio

## Education

### PES University

Bachelor of Technology in Computer Science & Engineering - CGPA : 8.06

September 2022 - Present

Bengaluru, Karnataka

### Geetanjali Olympiad School

12th CBSE Boards : 86%

June 2020 - July 2022

Bengaluru, Karnataka

### Delhi Public School Bangalore East

10th CBSE Boards : 90%

June 2007 - May 2020

Bengaluru, Karnataka

## Experience

### Centre of Cognitive Computing and Computational Intelligence

June 2025 - August 2025

Summer Research Intern

Bengaluru, Karnataka

- Built a career advisory platform that analyzed 30,000+ job postings & descriptions and 90,000+ courses, identifying skill gaps & recommending relevant skill-sets with a precision of almost 0.98.
- Optimized DSSM(Deep Structured Semantic Model) achieving a training loss of 0.08 & validation loss of 0.04.

## Projects

### Detection & Mitigation of Replay Attacks in CCTV Systems ↗ | Python, HTM, SDR, SHA-256      October 2025

- Implemented a Hierarchical Temporal Memory (HTM) model for lightweight, real-time anomaly detection of motion patterns, achieving an anomaly score of 0.05 on normal frames.
- Designed SHA-256-based frame hashing and verification pipeline ensuring tamper-evident and forensically reliable CCTV footage.

### AI-Powered Career Skill Gap Analysis & Recommendation ↗ | Python, ChromaDB, DSSM, Streamlit      July 2025

- Integrated all-MiniLM-L6-v2 embeddings with DSSM to improve semantic search and skill-course alignment.
- Delivered course recommendations achieving 0.98 precision by matching user skills with job-specific requirements.

### AI-Powered Regulatory Mining Intelligence Bot ↗ | Python, Sentence Transformers, MongoDB      April 2025

- Built a legal chatbot using NLP to retrieve and interpret mining laws, compliance rules, and regulations.
- Applied Sentence Transformers for contradiction detection and semantic search across regulatory documents.

### Blockchain-Powered AI Healthcare Insights ↗ | Python, IPFS, Multi-Chain Blockchain, Ollama      March 2025

- Linked electronic health records (EHR) stored on IPFS to blockchain IDs to ensure data integrity and traceability.
- Applied OCR and Ollama on patient histories to accelerate clinical decisions, predict drug interactions, and recommend treatments.

### IoT-Enabled Arduino-Based Intruder Detection and Alert System ↗ | C++, Arduino, GSM      April 2024

- Engineered a C++ system with ultrasonic sensors to trigger LED, buzzer, and GSM alerts on intrusion detection.
- Achieved < 100ms response time with real-time serial communication for rapid security notifications.

### Cloud File Transfer System using UDP ↗ | Python, UDP, Socket Programming, SSL, File Handling      March 2024

- Designed a UDP-based client-server system supporting upload, download, file listing, and remote execution for files up to 100MB.
- Enabled multi-client support with parallel commands and IP handling for 5+ concurrent users.

## Technical Skills

**Languages:** Python, R, C, C++, Java, Rust

**AI/ML:** TensorFlow, PyTorch, Scikit-learn, NLTK, SpaCy, Matplotlib, LLM, Seaborn

**Databases:** SQL, MongoDB, ChromaDB

**Tools / Platforms:** GitHub, Docker, Kubernetes, Vscode, Jupyter, Google Colab, Numpy, Pandas, Selenium, Streamlit

**Operating Systems:** Windows, Ubuntu, Linux

## Achievements

**Heal-O-Code Hackathon:** Secured Top 6 out of 50+ teams by building AI based healthcare decision support tool.

**MRD Scholarship:** Awarded the prestigious MRD Scholarship in 1st Semester, receiving a 20% tuition fee reimbursement.

**Distinction Scholarship:** Received the Distinction Scholarship of Rs.2000 for achieving SGPA > 7.75 in Semesters 2-6.

**Kaggle:** Ranked in the top 30% on Kaggle college hackathons for Data Analytics and Machine Learning coursework.